

CLAIMS

1. A roller chain transmission comprising a roller chain having interleaved pairs of inner and outer plates, cylindrical bushings fixed to bushing holes in the inner plates, pins rotatable in said bushings and fixed to pin holes in the outer plates, rollers rotatable on said bushings, and a toothed sprocket meshing with the roller chain,

wherein the outer diameter D of the rollers, the outer diameter d of the pins and the height H of the inner plates satisfy the following relationships with respect to the pitch P of the roller chain:

$$0.72P \leq D \leq 0.79P$$

$$0.40P \leq d \leq 0.44P$$

$$0.96P \leq H,$$

and

wherein the sprocket teeth have a tooth gap bottom with a radius r , satisfying the relationship $0.505D \leq r \leq 0.505D + 0.069^3\sqrt{D}$.